

WHAT IS CLAIMED IS:

1. A process for preparing an aqueous dispersion of pigment-containing polymer particles, comprising the steps of:

5 (A) removing an organic solvent from a mixture (I) comprising an organic solvent solution of a polymer, water and optionally a neutralizing agent to give a solvent-removed product; and

(B) subjecting the solvent-removed product obtained in step (A) to a dispersion treatment,

10 wherein a pigment is added to the mixture (I) or the solvent-removed product.

2. A process for preparing an aqueous dispersion of pigment-containing polymer particles, comprising the steps of:

15 (C) mixing an organic solvent solution of a polymer, water and optionally a neutralizing agent with each other to give a mixture (II);

(D) removing an organic solvent from the mixture (II) obtained in step (C);

(E) mixing a solvent-removed product obtained in step (D) with a pigment to give a mixture (III); and

(F) subjecting the mixture (III) obtained in step (E) to a dispersion treatment.

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3. A process for preparing an aqueous dispersion of pigment-containing polymer particles, comprising the steps of:

25 (G) mixing an organic solvent solution of a polymer, water, pigment and optionally a neutralizing agent with each other to give a mixture (IV);

(H) removing an organic solvent from the mixture (IV) obtained in step (G) to

give a solvent-removed product; and

(I) subjecting the solvent-removed product obtained in step (H) to a dispersion treatment.

5 4. A process for preparing an aqueous dispersion of pigment-containing polymer particles, comprising the steps of:

(C) mixing an organic solvent solution of a polymer, water and optionally a neutralizing agent with each other to give a mixture (II);
(K) mixing the mixture (II) obtained in step (C) with a pigment to give a mixture (VI);
(L) removing an organic solvent from the mixture (VI) obtained in step (K) to give a solvent-removed product; and
(M) subjecting the solvent-removed product obtained in step (L) to a dispersion treatment.

10 5. A process for preparing an aqueous dispersion of pigment-containing polymer particles, comprising the steps of:

(N) mixing an organic solvent solution of a polymer with a pigment to give a mixture (VII);
(O) mixing the mixture (VII) obtained in step (N), water and optionally a neutralizing agent with each other to give a mixture (VIII);
(P) removing an organic solvent from the mixture (VIII) obtained in step (O) to give a solvent-removed product; and
(Q) subjecting the solvent-removed product obtained in step (P) to a dispersion treatment.

6. An aqueous dispersion of pigment-containing polymer particles obtained by the process of any one of claims 1 to 5.

5 7. A water-based ink composition comprising the aqueous dispersion
of pigment-containing polymer particles of claim 6.